

AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph beginning on line 4 of page 34 (i.e., Example 2) as follows:

This example illustrates the preparation of NiSi/Si nanowire heterostructures, according to another embodiment of the invention. With reference to Fig. 3A, silicon nanowires dispersed in ethanol were deposited on a semiconductor wafer with 600 nm oxide (substrate 31 in Fig. 3A). A photolithography process was used to define nickel silicide regions as follows (see substrate 32 in Fig. 3A). Shipley S1813 photoresist was deposited by spin coating onto the wafer. The photoresist was then exposed for about 2 seconds on an ABM photoaligner using a 1 micron line-width, 2 micron pitch) striped photomask to define the nickel silicide regions. After developing for approximately 1 min, the wafer was transferred to a thermal evaporator and nickel was evaporated onto the wafer with a thickness approximately equal to the diameter of the nanowire (substrate 32 33). After the evaporation and lift-off of excess photoresist, annealing, etching, and post-annealing were performed using techniques similar to those described in Example 1. This method yielded NiSi/Si nanowire heterostructures on substrate 34 in Fig. 3A with a well-defined pattern determined by the line pattern of the photomask.